Ms. Kendra Stevens O'Brien
Human Resources Manager
Major Tool and Machine, Inc. Plant #3
2717 Tobey Drive
Indianapolis, Indiana, 46219

Re: Registered Construction and Operation Status, 097-12428-00390

Dear Ms. Stevens O'Brien:

The application from Major Tool and Machine, Inc. Plant #3, received on September 16th, 1998, has been reviewed. Based on the data submitted and the new provisions in IAPCB Regulation 2 (Permits) and state regulations 326 IAC 2-5.1-2 and 326 IAC 2-5.5, it has been determined that the following metal coating and blasting operations, to be located at 2717 Tobey Drive, Indianapolis, Indiana, 46219, are classified as registered. This Registration shall expire June 30th, 2005.

The source consists of the following facilities:

(a) One (1) Paint Booth, identified as PB-1, equipped with an air atomization spray coating gun, with a maximum capacity of 1.5 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack 001. Installed in 1987.

(b) One (1) Binks Sandblaster, identified as Emission Unit PB-1 , exhausting at one stack identified as stack 001, with dry filters for control, installed in 1988.

The following conditions shall be applicable:

1. Pursuant to IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

   (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

2. Pursuant to The Code of Indianapolis and Marion County Chapter 511, this registration will be subject to annual operating fees.

3. Pursuant to IAPCB Regulation 2-6 (Annual emission statement rule) and state regulation 326 IAC 2-6(Emission Reporting), an authorized individual shall provide an annual emission statement to the Environmental Resources Management Division and the Office of Air Management at the addresses listed below no later than April 15 of each year.

Technical Support and Modeling
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
and
Environmental Resources Management Division
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

3. Pursuant to IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.1-2(f)(3), an authorized individual shall provide an annual notice to the Environmental Resources Management Division and the Office of Air Management that the source is in operation and in compliance with this registration at the addresses listed below, in the format attached, no later than April 15 of each year.

Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015
and
Environmental Resources Management Division
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

4. 326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the surface coating operation and abrasive blasting shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission of 0.55 pounds per hour; and
P = process weight rate of less than 100 pounds/hour

The dry filters shall be in operation at all times the paint booth is in operation, in order to comply with this limit. The dry filters shall be in operation at all times the sandblaster is in operation in order to comply with this limit. The dry filters are an integral part of the sandblasting process.

5 326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), shall not be applicable to the paint booth PB-01 because this booth is limited to less than 15 pounds per day of VOC.

6. Reporting requirements

A quarterly summary of the information to document compliance with condition 5 above Shall be submitted to:

Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015
and

Environmental Resources Management Division
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

Using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarterly period being reported.

7. This registration is the first registration approval issued to this source. The source may operate according to IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.5.

The Permittee shall submit an application to renew this Registration prior to June 30th, 2005. An application or notification shall be submitted in accordance with IAPCB Regulation 2 (permits) and state regulation 326 IAC 2 to the Air Quality Management Section (AQMS) and the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Mona A. Salem, Chief Operating Officer
Department of Public Works, City of Indianapolis

KL

cc: Mindy Hahn, IDEM

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	**Major Tool and Machine, Inc. Plant #3**
Address:	**2717 Tobey Drive, Indianapolis, IN 46219**
City:	**Indianapolis**
Authorized individual:	**Kendra Stevens-O'Brien**
Phone #:	**(317) 868-2614**
Registration #:	**097-12428-00390**

I hereby certify that **Major Tool and Machine, Inc. Plant #3** is still in operation and is in compliance with the requirements of Registration **097-12428-00390**.

Name (typed):
Title:
Signature:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION
DATA COMPLIANCE

Registration Quarterly Report

Source Name: Major Tool and Machine, Inc.
Source Address: 2717 Tobey Drive, Indianapolis, IN 46219
Mailing Address: 2717 Tobey Drive, Indianapolis, IN 46219
Registration No: 097-12428-00390
Facility: Paint Booth PB-01
Parameter: Volatile Organic Compound (VOC)
Limit: 15 pounds per day

Month:_____ **Year:**_____

Material	Column 1	Column 2	Column 1 + Column 2
	Highest lb/day VOC emission over last quarter	Highest lb/day VOC emission over previous quarter	
Primer Epoxy			
Urethane			
Total			

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____
Title/Position: _____
Signature: _____
Date: _____

Indianapolis Environmental Resources Management Division
Air Quality Management Section

and

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	Major Tool and Machine, Inc. Plant #3
Source Location:	2717 Tobey Drive, Indianapolis, IN 46219
County:	Marion
Operation Permit No.:	097-12428-00390
Permit Reviewer:	Kevin Leone

The Environmental Resources Management Division (ERMD) has reviewed an application for Major Tool and Machine, Inc. Plant #3 relating to the operation of miscellaneous metal parts coating and abrasive blasting.

New Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

(a) One (1) Paint Booth, identified as PB-1, equipped with an air atomization spray coating gun, with a maximum capacity of 1.5 gal/hr, using dry filters as control, exhausting at one (1) stack identified as stack 001. Installed in 1987, but has been deactivated (non-operational) since it was installed. Major Tool and Machine, Inc. wants to activate booth.

(b) One (1) Binks Sandblaster, identified as Emission Unit PB-1 , exhausting at one stack identified as stack 001, with dry filters for control, installed in 1988.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has had no previous permits.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the dry filters be considered as an integral part of this processes:

(a) One (1) Binks Sandblaster

Major Tool and Machine, Inc. believes these processes are inherent to the physical and operational design of the facility on the grounds that these facilities cannot operate without the pollution control equipment. Major Tool and Machine, Inc. states that the control equipment on the blast unit "Has an overwhelming positive net economic effect and results in waste minimization."

Major Tool and Machine, Inc. submitted photographs of the unit as well as a schematic of the abrasive unit and a flow diagram with the dry filter. In addition, Major Tool and Machine, Inc. states "The actual cost of the abrasive material (aluminum oxide) is $0.34 per pound or $136 per 400 pound drum. Under normal operating conditions a drum of spent abrasive dust is sent offsite every three to four weeks to the supplier who is able to reclaim a portion of the material. Abrasive is recycled through the system approximately four times before it is no longer usable. Therefore, without recovery and reuse of the abrasive, a drum of new abrasive would have to be added to the unit each week at a cost of $136 per drum, that amounts to $544 per month, or $6,528 per year."

Copies of the photographs of the unit as well as a schematic of the abrasive unit and a flow diagram with the dry filter will be added to the permit.

ERMD, OAM has evaluated the justifications and agreed that the above mentioned equipment will be considered as integral parts of the processes. Therefore, the permitting level will be determined for these facilities using the potential to emit after the air pollution control equipment. Operating conditions in the proposed permit will specify that this air pollution control equipment shall operate at all times when the processes are in operation.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
001	Paint spray booth, identified as PB-1	16.5	2.0	6,755	Ambient
002	Abrasive blasting booth, identified as BB-1	6	2.0	1,260	Ambient

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 15th, 2000.

Emission Calculations

See Appendix A , of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	13.8
PM-10	13.8
SO_2	0.00
VOC	15.23
CO	0.00
NO_x	0.00

HAP's	Potential To Emit (tons/year)
Strontium Chromate	7.65
Xylene	3.51
Methyl Isobutyl Ketone	3.51
TOTAL	14.67

* This source is a registration because their potential emissions for criteria pollutants are less than 25 tons per year and more than 5 tons per year. Please note that the potential to emit for Particulate matter for the sandblaster is after control, since their control device is considered integral to the process.

(a) This source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories. Therefore the requirements of 326 IAC 2-5 apply.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 ERMD and OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	negligible
PM-10	negligible
SO_2	negligible
VOC	7.58
CO	negligible
NO_x	negligible

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO_2	maintenance
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Marion County has been classified as attainment or unclassifiable for PM-10, SO_2, NO_2, Ozone, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Pollutant	Emissions (ton/yr)
PM	14.2
PM10	14.2
SO_2	0.0
VOC	15.23
CO	negligible
NO_x	negligible

The total PM and PM10 from the paint booth is 13.76 tons per year. The total PM and PM10 emissions from the abrasive blasting operation is 0.44 tons per year, after integral controls, so the total emissions are 14.2 tons per year.

This source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed

source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

1. There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

2. There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)326 IAC 14 and 40 CFR part 63) applicable to this source.

State and Local Rule Applicability - Entire Source

1. IAPCB Regulation 2 (Permits) and 326 IAC 2-5 (Registration Content)

   Pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 2-5.5-4 (Registration Content) An authorized individual shall provide an annual notice to the Environmental Resources Management Division and the Office of Air Management that the source is in operation and in compliance with this registration pursuant to state regulation 326 IAC 2-5.5-4(a)(3).
   In order to stay in compliance with this registration, the source shall keep it's potential to emit for criteria pollutants under 25 tons per year, under 10 tons per year for individual HAP, and under 25 tons per year for combination of HAPs.

2. 326 IAC 2-4.1 (New Source Toxics Control)

   326 IAC 2-4.1 (New Source Toxics Control) is not applicable to this source because it does not meet the definition of a major source; the potential emissions for HAPs are less than 10 tons per year for a single HAP and less than 25 tons per year for combined HAPs.

3. IAPCB Regulation 2-6 (Annual emission statement rule)

   Pursuant to IAPCB Regulation 2-6 (Annual emission statement rule) and 326 IAC 2-6 (Emission Reporting), an authorized individual with a source that has a potential to emit more than ten (10) tons per year of volatile organic compounds, shall provide an annual emission statement to the Environmental Resources Management Division and the Office of Air Management.

4. IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1 (Visible Emissions Limitations)

   Pursuant to IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this

permit:

(a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State and Local Rule Applicability - Individual Facilities

1. 326 IAC 8-2-9 (Miscellaneous Metal Coating)
Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), shall not be applicable to the paint booth PB-01 because this booth is limited to less than 15 pounds per day of VOC.

2. The surface coating operation is not subject to the requirements of 326 IAC 6-1-2 (Particulate emission limitations) because the potential particulate matter emissions are less than 100 tons per year and the actual particulate matter emissions are less than 10 tons per year.

3. 326 IAC 6-3-2 (Process Operations)
The particulate matter (PM) from the surface coating operation and abrasive blasting shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission of 0.55 pounds per hour; and
P = process weight rate of less than 100 pounds/hour

The dry filters shall be in operation at all times the paint booth is in operation, in order to comply with this limit. The dry filters shall be in operation at all times the sandblaster is in operation, in order to comply with this limit.

Compliance Monitoring

Compliance Monitoring is not necessary for the surface coating operation or for the dry filters because there is no applicable NESHAP or NSPS and the allowable emissions do not exceed 10 pounds per hour.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

(a) This New Source Registration will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

See attached spreadsheets for detailed air toxic calculations.

Conclusion

The operation of Major Tool and Machine, Inc. Plant #3 shall be subject to the conditions of the attached proposed Registration R097-12428-00390.

Appendix A: Emission Calculations
Abrasive Blasting

Company Name: Major Tool and Machine, Inc.
Address City IN Zip: 2717 Tobey Drive Indianapolis, Indiana 46219
Reviewer: Kevin Leone
Date: June 22nd, 2000

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter, in	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)

FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	309
D = Density of abrasive (lb/ft3) From Table 2 =	160
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.25
ID1 = Nozzle internal diameter (in) from Table 3 =	0.25

Flow Rate (FR) (lb/hr) = **499.394** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010
FR = Flow Rate (lb/hr) =	499.394
w = fraction of time of wet blasting =	0 %
N = number of nozzles =	1

Uncontrolled Emissions =	**4.99 lb/hr**
	21.87 ton/yr

Controlled Emissions = 0.44 tons per year

METHODOLOGY

Emission Factors from Stappa Alapco, Section 3 "Abrasive Blasting"
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)